



## SEQUENCE LISTING

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<120> ANTI-NEOPLASTIC VIRAL AGENTS

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ggttttctgca	taaacacaaa	ataaaataac	aaaaaaacat	ttaaacatta	gaagcctgtc	35160
ttacaacagg	aaaaacaacc	cttataagca	taagacggac	tacggccatg	ccggcgtagc	35220
cgtaaaaaaa	ctgggtcaccg	tgattaaaaa	gcaccaccga	cagctcctcg	gtcatgtccg	35280
gagtcataat	gtaagactcg	gtaaacacat	caggttgatt	catcgggtcag	tgctaaaaag	35340
cgaccgaaat	agcccggggg	aatacatacc	cgcaggcgta	gagacaacat	tacagccccc	35400
ataggaggta	taacaaaatt	aataggagag	aaaaacacat	aaacacctga	aaaacctctc	35460
tgccataggca	aatagcacc	ctcccgtctc	agaacaacat	acagcgcttc	acagcggcag	35520
cctaacagtc	agccttacca	gtaaaaaaga	aaacctatta	aaaaaacacc	actcgacacg	35580
gcaccagctc	aatcagtcac	agtgtaaaaa	agggccaagt	gcagagcgag	tatatatagg	35640
actaaaaaat	gacgtaacgg	ttaaagtcca	caaaaaacac	ccagaaaacc	gcacgcgaac	35700
ctacgcccag	aaacgaaagc	caaaaaaccc	acaacttcct	caaatacgta	cttcggtttt	35760
cccacgttac	gtaacttccc	attttaagaa	aactacaatt	cccaacacat	acaagttact	35820
ccgccctaaa	acctacgtca	ccgcgcccg	tcccacgccc	cgcgccacgt	cacaaactcc	35880
acccctcat	tatcatattg	gcttcaatcc	aaaaataagg	atattattga	tgatg	35935

&lt;210&gt; 2

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer  
  
 <400> 2  
 ggggtggaaag ccagcctcgt g 21  
  
 <210> 3  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer  
  
 <400> 3  
 acccgcaggc gtagagacaa c 21  
  
 <210> 4  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer  
  
 <400> 4  
 agatcaaagg gattaagatc aaagggccac cacctcatta t 41  
  
 <210> 5  
 <211> 48  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer  
  
 <400> 5  
 tccctttgat ctccaaccct ttgatctagt cctatttata cccggtga 48  
  
 <210> 6  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer  
  
 <400> 6  
 tccctttgat ctccactagt gtgaattgta gttttcttaa aatg 44  
  
 <210> 7  
 <211> 27  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 7

gaactagtag taaatttggg cgtaacc

27

<210> 8

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 8

acgctagcaa aacacctggg cgagt

25

<210> 9

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 9

cattttcagt cccggtgtcg

20

<210> 10

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 10

accgaagaaa tggccgccag

20

<210> 11

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 11

tctgtaatgt tggcgggtgca ggaag

25

<210> 12  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 12  
 atggctagga ggtggaagat

20

<210> 13  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 13  
 gtgtcggagc ggctcggagg

20

<210> 14  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 14  
 caggtcctca tatagcaaag c

21

<210> 15  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 15  
 tgtctgaacc tgagcctgag

20

<210> 16  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 16  
 catctctaca gcccatat

18

<210> 17  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 17  
 agttgctctg cctctccac

19

<210> 18  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 18  
 cgtgattaaa aagcaccacc

20

<210> 19  
 <211> 126  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Mut E1A  
 promoter sequence

<400> 19  
 catcatcaat aatatacctt attttggatt gaagccaata tgataatgag gtggtggccc 60  
 tttgatctta atccctttga tctggatccc tttgatctcc aaccctttga tctagtctta 120  
 tttata 126

<210> 20  
 <211> 9  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Promoter  
 replacement sequence

<400> 20  
 atcaaaggg

9

<210> 21  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Promoter  
replacement sequence

&lt;400&gt; 21

atcaaaggga tccagatcaa agg

23

&lt;210&gt; 22

&lt;211&gt; 52

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Promoter  
replacement sequence

&lt;400&gt; 22

atcaagggtt ggagatcaaa gggatccaga tcaaagggat taagatcaaa gg

52

&lt;210&gt; 23

&lt;211&gt; 53

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Promoter  
replacement sequence

&lt;400&gt; 23

atcaaagggt tggagatcaa agggatccag atcaaaggga ttaagatcaa agg

53

&lt;210&gt; 24

&lt;211&gt; 654

&lt;212&gt; DNA

&lt;213&gt; Escherichia coli

&lt;400&gt; 24

atggatatca	tttctgtcgc	cttaaagcgt	cattccacta	aggcatttga	tgccagcaaa	60
aaacttaccc	cggaacaggc	cgagcagatc	aaaacgctac	tgcaatacag	cccatccagc	120
accaactccc	agccgtggca	ttttattggt	gccagcacgg	aagaaggtaa	agcgcgtggt	180
gccaaatccg	ctgccggtaa	ttacgtgttc	aacgagcgta	aaatgcttga	tgccctcgac	240
gtcgtggtgt	tctgtgcaaa	aaccgcgatg	gacgatgtct	ggctgaagct	ggttgttgac	300
caggaagatg	ccgatggccg	ctttgccacg	ccggaagcga	aagccgcgaa	cgataaagg	360
cgcaagttct	tcgctgatat	gcaccgtaaa	gatctgcatg	atgatgcaga	gtggatggca	420
aaacaggttt	atctcaacgt	cggtaacttc	ctgctcggcg	tggcggctct	gggtctggac	480
gcggtaccca	tcgaagggtt	tgacgccgcc	atcctcgatg	cagaatttgg	tctgaaagag	540
aaaggctaca	ccagtctggt	ggttgttcgg	gtaggtcatc	acagcgttga	agattttaac	600
gctacgctgc	cgaaatctcg	tctgccgcaa	aacatcacct	taaccgaagt	gtaa	654

&lt;210&gt; 25

&lt;211&gt; 477

&lt;212&gt; DNA

&lt;213&gt; Saccharomyces cerevisiae



&lt;400&gt; 25

```

atggtgacag ggggaatggc aagcaagtgg gatcagaagg gtatggacat tgcctatgag 60
gaggcggcct taggttacaa agagggtggg gttcctattg gcggatgtct tatcaataac 120
aaagacggaa gtgttctcgg tcgtgggtcac aacatgagat ttcaaaaggg atccgccaca 180
ctacatgggtg agatctccac tttggaaaac tgtgggagat tagagggcaa agtgtacaaa 240
gataccactt tgtatacgac gctgtctcca tgcgacatgt gtacagggtc catcatcatg 300
tatggtattc cacgctgtgt tgtcgggtgag aacgttaatt tcaaaagtaa gggcgagaaa 360
tatttacaaa ctagagggtca cgagggttgt gttgttgacg atgagagggtg taaaaagatc 420
atgaaacaat ttatcgatga aagacctcag gattggtttg aagatattgg tgagtag 477

```

&lt;210&gt; 26

&lt;211&gt; 576

&lt;212&gt; DNA

&lt;213&gt; Encephalomyocarditis virus

&lt;400&gt; 26

```

cgccccctctc cctccccccc ccctaacgtt actggccgaa gccgcttggg ataaggccgg 60
tgtgcgtttg tctatatgtt attttccacc atattgccgt cttttggcaa tgtgagggcc 120
cggaaccttg gccctgtctt cttgacgagc attcctaggg gtctttcccc tctcgccaaa 180
ggaatgcaag gtctgttgaa tgtcgtgaag gaagcagttc ctctggaagc ttcttgaaga 240
caaacaacgt ctgtacgac cctttgcagg cagcggaacc cccacctgg cgacagggtc 300
ctctgcggcc aaaagccacg tgtataagat acacctgcaa aggcggcaca accccagtgc 360
cacgttgtga gttggatagt tgtggaaaga gtcaaattgg tctcctcaag cgtattcaac 420
aaggggctga aggatgcccc gaaggtagcc cattgtatgg gatctgatct ggggcctcgg 480
tgcacatgct ttacatgtgt ttagtcgagg ttaaaaaacg tctaggcccc ccgaaccacg 540
gggacgtggg tttcctttga aaaacacgat gataat 576

```

&lt;210&gt; 27

&lt;211&gt; 492

&lt;212&gt; DNA

&lt;213&gt; Adenovirus type 5

&lt;400&gt; 27

```

catcatcaat aatatacctt attttggatt gaagccaata tgataatgag ggggtggagt 60
ttgtgacgtg gcgcggggcg tgggaacggg gcgggtgacg tagtagtgtg gcggaagtgt 120
gatgttgcaa gtgtggcgga acacatgtaa gcgacggatg tggcaaaagt gacgtttttg 180
gtgtgcgccg gtgtacacag gaagtgacaa ttttcgcgcg gttttaggcg gatgtttag 240
taaatttggg cgtaaccgag taagatttgg ccattttcgc gggaaaactg aataagagga 300
agtgaatct gaataatttt gtgttactca tagcgcgtaa tatttgtcta gggccgcggg 360
gactttgacc gtttacgtgg agactcgccc aggtgttttt ctcagggtgt ttccgcgttc 420
cgggtcaaag ttggcgtttt attattatag tcagctgacg tgtagtgtat ttatacccg 480
tgagttcctc aa 492

```

&lt;210&gt; 28

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Adenovirus type 5

&lt;400&gt; 28

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gtcacagtgt aaaaaagggc caagtgcaga gcgagtatat ataggactaa aaaatgacgt 60
aacgggttaa gtccacaaaa aacacccaga aaaccgcacg cgaacctacg cccagaaacg 120
aaagccaaaa aaccacacaac ttcctcaaat cgtcacttcc gttttccac gttacgtcac 180
ttcccatttt aagaaaacta caattcccaa cacatacaag ttactccgcc ctaaaacct 240
cgtcaccgcg cccgttccca cgccccgcgc cacgtcaca actccacccc ctcattatca 300
tattggcttc aatccaaaat aaggatatatt attgatgatg 340

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<210> 29  
 <211> 481  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Mut E4  
 promoter sequence

<400> 29  
 gtcacagtgt aaaaaagggc caagtgcaga gcgagtatat ataggactaa aaaatgacgt 60  
 aacgggttaaa gtccacaaaa aacacccaga aaaccgcacg cgaacctacg cccagaaaacg 120  
 aaagccaaaa aaccacacaac ttcctcaaat cgctcaattcc gttttcccac gttacgtcac 180  
 ttcccatttt aagaaaacta caattcacac tagcaaaaca cctgggcgag tctccacgta 240  
 aacgggtcaaa gtccccgcgg ccctagacaa atattacgcg ctatgagtaa cacaaaatta 300  
 ttcagatttc acttcctctt attcagtttt cccgcgaaaa tggccaaatc ttactcggtt 360  
 acgccc aaat ttactactag tggagatcaa agggatccag atcaaaggga ttaagatcaa 420  
 agggccacca cctcattatc atattggctt caatccaaaa taaggatat tattgatgat 480  
 g 481

<210> 30  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 30  
 tgcattggta ccgtcatctc ta 22

<210> 31  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 31  
 gttgctctgc ctctccactt 20

<210> 32  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 32  
 cagatcaaag ggattaagat caaagggccca ttatgagcaa g 41

<210> 33  
 <211> 43  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 33  
 gatccctttg atctccaacc ctttgatcta gtccttaaga gtc 43

<210> 34  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 34  
 gggcgagtct ccacgtaaac g 21

<210> 35  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 35  
 gggcaccagc tcaatcagtc a 21

<210> 36  
 <211> 38  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 36  
 cggaattcaa gcttaattaa catcatcaat aatataacc 38

<210> 37  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 37  
 gcggctagcc accatggagc gaagaaaccc a 31

<210> 38  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 38  
 gccaccggta caacattcat t 21

<210> 39  
 <211> 40  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 39  
 agctgggctc tcttggtaca ccagtgcagc gggccaacta 40

<210> 40  
 <211> 42  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 40  
 cccaccactg tagtgctgcc aagagacgcc caggccgaag tt 42

<210> 41  
 <211> 36  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 41  
 ctgcgccccg ctattggtca tctgaacttc ggcttg 36

<210> 42  
 <211> 32  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 42  
 cttgcgggcg gctttagaca cagggcgcg tc 32

<210> 43  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 43  
 cagatcaaag ggccattatg agcaag 26

<210> 44  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 44  
 gatccctttg atctagtcct taagagtc 28

<210> 45  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 45  
 atggcacaaa ctccctcaata a 21

<210> 46  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 46  
 ccaagactac tcaacccgaa ta 22

<210> 47  
 <211> 143  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mut E1A  
promoter sequence

<400> 47

catcatcaat aatatacctt attttggatt gaagccaata tgataatgag gtggtggccc 60  
tttgatctta atccctttga tctggatccc tttgatctcc aaccctttga tctagtccta 120  
tttatacccg gtgagttcct caa 143

<210> 48

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 48

agtttcttta ttcttgggca atgt 24

<210> 49

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 49

agtcgtttgt gttatgtttc aac 23

<210> 50

<211> 60

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 50

tcgctagcca ggcacaatct tcgcatttct ttttttccag atggtgacag ggggaatggc 60

<210> 51

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer

<400> 51

tgactagtta ttcaccaata tcttcaaa 28

<210> 52  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 52  
 atgctagcga attccgcccc tctc 24

<210> 53  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 53  
 atactagtta tgcattattat catcgtgttt 30

<210> 54  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 54  
 ggaattcgct agtttctcta ctcttgggca atgta 35

<210> 55  
 <211> 30  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 55  
 ggtggtggag atgctaaact cactttggtc 30

<210> 56  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 56  
 gtgacagggg gaatggcaag 20

<210> 57  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 57  
 tgactagttt attcaccaat atcttcaaa 29

<210> 58  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 58  
 gccattaatg caggagatg 19

<210> 59  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 59  
 ggagaaagga ctgtgtactc 20

<210> 60  
 <211> 28  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 60  
 aggatccact ctcttccgca tcgtgtgc 28

<210> 61  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 61



agggttttcc cagtcacgac gtt

23

<210> 62  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer

<400> 62  
 agcggataac aatttcacac agga

24

<210> 63  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative  
 peptide

<400> 63  
 Glu Asp Pro Asn Glu Glu  
 1 5

<210> 64  
 <211> 6  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative  
 peptide

<400> 64  
 Ala Ala Ala Ala Ala Gly  
 1 5

<210> 65  
 <211> 4  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Illustrative  
 peptide

<400> 65  
 Leu Asp Leu Ser  
 1

<210> 66

<211> 4

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Illustrative  
peptide

<400> 66

Ala Ala Ala Ala

1